



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,073	04/27/2001	Satoshi Okamoto	2576-108	9256
6449	7590	05/05/2004	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			POKER, JENNIFER A	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,073

Applicant(s)

OKAMOTO ET AL.

Examiner

Jennifer A. Poker

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 30, 2003 has been entered.

General Status

2. This is a first action on the merits of RCE submitted on December 30, 2003. Claim 7 was cancelled, therefore; claims 1-6 and 8-13 are pending and are being examined.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 8, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,322,875 to Kimura in view of U.S. Patent Number 6,084,190 to Kenmochi.

Kimura discloses a layered key top for assembly in a push button switch comprising:

(1) A base key top (Abstract) (Figures 4 and 5);

Art Unit: 2832

- (2) An inorganic thin membrane located above the surface of the key top, characterized by rainbow-colored luster. (Abstract) (Figures 4 and 5); inorganic thin film made of metal materials such as aluminum, platinum, copper or alloy, metallic oxide, etc; (Column 3, lines 32-35)
- (3) A transparent high polymer protective membrane on the surface of the inorganic thin membrane; (Abstract) (Column 5, lines 61-67) (Figures 4 and 5)
- (4) (Known in conventional methods) A method of metal plating is used for placing layers upon surfaces of others; (Column 1, lines 13-22)
- (5) A layer between the base and the inorganic thin membrane, in order to protect the printed layer of a letter or symbol; (Figure 7) (Column 7, lines 31-32). Any layer/film/membrane incorporated will substantially prevent heat transfer. It is an inherent characteristic.
- (6) An operating portion; (Column 2, lines 37-39)
- (7) A hollowed section located at the bottom end of the switch. (Figure 6)

Kimura discloses the claimed invention except for a “molded” film. However, Kimura does disclose a polymer membrane. It is well known to those ordinarily skill in the art that a polymer may be molded. Furthermore, applicant admits in the abstract of the disclosure along within the first embodiment of the invention that a polymer is a moldable substance. However; a second reference will be discussed to illustrate that moldable layers/key tops is known in the art.

Kenmochi discloses an illuminated keypad key comprising a light-permeable resin key top. The film on the key top is formed by resin molding in order to improve the durability of the push button key/switch.

One skilled in the art, at the time the invention was made would have found it obvious to combine the teachings of Kimura with the teachings of Kenmochi and incorporate a resin molded key top in order to improve the durability of the push button.

Art Unit: 2832

Claims 10-12 are method counterparts to product claim 1, and steps are inherent for fabricating a press button switch as claimed by the inventor.

4. Claims 2-4 and 13 is rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent Number 6,322,875 to Kimura in view of U.S. Patent Number 6,084,190 to Kenmochi.

Regarding claims 2 and 3, Kimura discloses the claimed invention except for the transparent film being colored (claim 2) or the transparent film being colorless (claim 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to either use a colored film or a colorless film (one or the other would have to be used), since applicant has not disclosed that the color film, as claimed in claim 2, or the colorless film, as claimed in claim 3, solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with either colored or colorless. The applicant even states on page 2, line 33 and on page 3 line 4 that either one is preferable.

Regarding claim 4, Kimura states that an inorganic thin membrane with transmittance acts as a third layer; (figure 6) (Column 3, lines 13-14)

Regarding claim 13, Kimura discloses the claimed invention except for the undercoat layer being formed by depositing metal on the film, however he does disclose deposition methods in general.

Although the product claim is limited by and defined by the recited process, "...formed...by vapor deposition," the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985)

Response to Arguments

5. Applicant's arguments filed December 30, 2003 have been fully considered but they are not persuasive:

(a) Applicant states that the Kimura reference does not disclose the use of a molded film. As clearly stated in the above art rejection, Kimura DOES disclose the use of a polymer membrane. It is well known to those ordinarily skill in the art that a polymer may be molded. Furthermore, to support the examiner's assertion that it is known that polymers may be molded, applicant admits in the abstract of the disclosure along within the first embodiment of the invention that a polymer is a moldable substance. However; a second reference will be discussed to illustrate that moldable layers/key tops is known in the art.

(b) In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Kenmochi reference is introduced simply to illustrate the use of moldable materials in keys/buttons.

(c) Applicant has incorporated the limitation "...protective film substantially prevents heat from being conveyed from said base body to said undercoat layer." Although, Kimura reference does not specifically state that the layer between the base and the inorganic thin membrane substantially prevents heat, it is an inherent characteristic of ANY type of layer or membrane. When

Art Unit: 2832

a layer of any thickness or material is present between two objects, it inherently prevents at least SOME heat from penetrating.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Poker whose telephone number is 571-272-1997. The examiner can normally be reached on 5:30-4:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jap
April 29, 2004


LINCOLN DONOVAN
PRIMARY EXAMINER
GROUP 2100